

REMARKS/ARGUMENTS

These remarks are made in response to the Office Action of May 1, 2006, and the Advisory Action of August 21, 2006. This response is filed concurrently with a Request for Continued Examination (RCE) and a request for retroactive Two-month Extension of Time. The Office is expressly authorized to charge any and all fees to Deposit Account No. 50-0951.

In the Office Action, Claims 1-8, 11-13, 15-17, 46,-53, 56-58, 60-62, 64-66, and 69-71 were rejected under 35 U.S.C. § 103 (a) as being unpatentable over U.S. Patent No. 6,064,959 to Young *et al.* (hereinafter Young), in view of U.S. Patent No. 6,430,551 to Thelen *et al.* (hereinafter Thelen). Claims 14 and 59 were rejected under 35 U.S.C. § 103 (a) as being unpatentable over Young, in view of Thelen, as applied to claims 1 and 46, and further in view of U.S. Patent No. 5,799,273 to Mitchell *et al.* (hereinafter Mitchell). Claims 18 and 63 were rejected under 35 U.S.C. § 103 (a) as being unpatentable over Young, in view of Thelen applied to claims 1 and 46, and further in view of U.S. Patent No. 5,680,511 to Baker *et al.* (hereinafter Baker).

Applicants have further amended independent Claims 1, 46, and 64 to clarify certain aspects of the invention. As discussed herein, the claim amendments are fully supported throughout the Specification. No new matter has been added through the claim amendments.

Applicants' Invention

It may be useful to reiterate certain aspects of Applicants' invention prior to addressing the cited references. One embodiment of the invention, exemplified by amended Claim 1, is a method of recognizing speech using a computer. The method can include receiving non-voice input, such as text contained in an e-mail, information in a document attached to an e-mail, information in a document viewed on a display of a

computer system, information in a plurality of linked documents accessible to the computer system, information in a spread sheet executing on the computer system, facsimile information received via a facsimile device connected to the computer system, call center information received via a calling device connected to the computer system, and/or information recorded by a web browser executing on the computer system. (See, e.g., Specification, p. 8, line 17 – p. 9, line 16.)

Such input is comparable to telephony signals, serially generated character strings representing words, and other signals that are widely-recognized in the communications literature as comprising random signals. A signal is random, rather than deterministic, precisely because the signal cannot be anticipated with certainty in advance of its being transmitted and received.

So, too, with respect to the non-voice input in the context of the present invention. The non-voice input is random because the input cannot be deterministically anticipated in advance of the input being received; that is, it is impossible to know in advance precisely what information will be received in, for example, an e-mail. Likewise, it is impossible to determine or know *a priori* what type of information will be received from a call center, for example. Indeed, with the invention, none of the various identified sources of input need be known *a priori*. It is known only after the information is generated, and after it is received, that the type and content are known. Consistent with the widely-recognized terminology referred to above, the input is random.

Based upon the received information – which because it is randomly generated and transmitted, is randomly received – a word list, defining a context-enhanced database can be created. Alternatively, the word list so created can be added to, and thereby modify, an existing context-enhanced database. (See, e.g., Specification, p. 10, lines 9-19.)

The method can further include preparing a first textual output from a speech signal by performing a speech recognition task to convert the speech signal into the first textual output. The context-enhanced database can then be accessed to improve the speech recognition rate. The speech signal can be parsed into a plurality of computer processable speech segments. The first textual output can include a plurality of text segments, each corresponding to one of the computer processable speech segments. Selective ones of the text segments can be generated by matching each computer processable speech segment against an entry within the context-enhanced database.

Additionally, the context-enhanced database can include a plurality of entries, each comprising a speech utterance and a corresponding textual segment for the speech utterance. The method, moreover, can include enabling the editing of the first textual output to generate a final, voice-generated output.

The Claims Define Over The Prior Art

As already noted, Claims 1, 46, and 64 were rejected as being unpatentable over Young in view of Thelen. Young is directed to a system and method for correcting incorrect text associated with errors that occur during a speech recognition process. According to Young a "constraint grammar" is activated when a user "opens" a particular application program with which the constraint grammar is "associated." (See Col. 4, line 52 – Col. 5, line 4.) Such a grammar has its own vocabulary that is strictly based upon a "dictation topic." The vocabulary thus comprises terms pertinent to a specific topic, and accordingly must be determined a priori according to the particular topic. One example is a vocabulary of known medical terms. Another is a vocabulary of legal terms. (See Col. 5, lines 55-63; and Col. 6, lines 33-40.)

As the cited portions of Young reveal, Young's grammars and vocabularies are each created in accordance with a particular application program or a particular topic. It

follows, however, that Young's types of vocabularies are fundamentally different from the context-enhanced database created by Applicants' invention. Young's first described vocabulary is pre-determined in accordance with the particular application program to which it is associated. In particular, the vocabulary is opened by a user activating the particular application program. If the "input" is the very act of a user's opening the application program, then it logically follows the vocabulary already exists when the program is opened.

Similarly, with regard to Young's second described vocabulary, the dictation vocabulary. The dictation vocabulary also is pre-determined in that it is created before any event that activates the vocabulary. The dictation vocabulary is based solely on the words that pertain to a particular topic with which the dictation vocabulary is associated.

It follows, therefore, that Young nowhere teaches or suggests either the type or the manner of creating a context-enhanced database as taught by Applicants' invention. Specifically, Young does not teach or suggest creating a word list defining a context-enhanced database based upon random input; that is, input for which neither type nor content are known *a priori*, such as text received in an e-mail. By contrast with the present invention, Young does not contemplate input that is not anticipated by topic or otherwise unknown in advance of its being generated and subsequently received.

Nor does Young teach or suggest modifying an existing context-enhanced database by adding a word list created based upon randomly received input. E-mail text includes terms that do not necessarily correspond to a predefined topic. Indeed, an e-mail may include terms covering many topics. In any event, when such input is received, it is received as random input. There is no opportunity *a priori* to have created the word list, because it is not known beforehand what words will be received. Such words may be personal names, disparate locations, or any other such non-topic-specific words.

Such words will not be found in Young's application vocabulary, which correspond to an existing application program. In Young, it is the application program, not random input, that determines the vocabulary. Nor will such words be found in Young's dictation grammar, since the grammar is determined solely by the particular topic (e.g., medical, legal, etc.) The topic determines the grammar, not random input.

It further follows that Young nowhere teaches or suggests that a precise, unique word list can be created based on specific information received in any of the various forms. Specifically, Young does not address or contemplate creating a unique word list based upon information received as text contained in an e-mail, in a document attached to an e-mail, in a document viewed on a display of a computer system, in a plurality of linked documents accessible to the computer system, in a spread sheet executing on the computer system, received via a facsimile device connected to the computer system, received via a calling device connected to the computer system, and/or recorded by a web browser executing on the computer system. As already noted, the information received from such sources can not be known before hand, and thus can only be received as random rather than deterministic input. Young by contrast nowhere discloses creating a context-enhanced database from a word list based on such random input.

Thelen is cited as teaching that a vocabulary or language model can be created from documents distributed over several servers connected over the Internet. Thelen is silent, though, about creating either a vocabulary or language model based upon input received, let alone random input. As suggested in Thelen, documents are obtained over the Internet and then the vocabulary or language model is created.

More fundamentally, Thelen is similar to Young in that the documents deemed relevant for creating the vocabulary or language model are those that correspond to a predetermined topic or category. Specifically, as noted in the Office Action, Thelen suggests that vocabulary or language model is created based upon documents relevant to

a specific category of user, such as a surgeon, radiologist, or legal practitioner. Nowhere, though, does Thelen teach or suggest creating or modifying a context-enhanced database using a unique word list based upon random input.

Accordingly, neither Young nor Thelen, alone or in combination, teaches or suggests each of the features recited in independent amended Claims 1, 46, and 64. Applicants, therefore, respectfully submit that Claims 1, 46, and 64 each define over the prior art. Applicants further respectfully assert that whereas each of the remaining dependent claims depends from one of amended Claims 1, 46, or 64 while reciting additional features, the dependent claims likewise define over the prior art.

CONCLUSION

Applicants believe that, in view of the claim amendments presented herein, this application is now in full condition for allowance, which action is respectfully requested. The Applicants request that the Examiner call the undersigned if clarification is needed on any matter within this Amendment, or if the Examiner believes a telephone interview would expedite the prosecution of the subject application to completion.

Respectfully submitted,

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